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| Mark B. Wilson Fulbright & Jaworski L.L.P. Suite 2400 600 Congress Avenue Austin, TX 78701 | | | ELHILO, EISA B | |
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| | | | 1751 | |

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,259

Applicant(s)

COTTERET ET AL.

Examiner

Eisa B Elhilo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11, 22-29 and 32-63 is/are rejected.
- 7) ☒ Claim(s) 9, 12-21, 30 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/25/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Claims 1-63 are pending in this application.

DETAILED ACTION

Examiner position

1 The examiner makes of record that instant claims 48, 49 and 54 recite a broad range followed by a series of narrow ranges. For examination purposes, the examiner asserts that the narrow ranges recited in the instant claims 48, 49 and 54 merely exemplary ranges, and thus, the prior art will be applied against the broadest range recited in the instant claims 48, 49 and 54. Further, the examiner suggests that applicant should delete the narrow ranges from the instant claims 48, 49 and 54 and add new dependent claims that recite the narrow ranges recited in the instant claims 48, 49 and 54.

Claim Rejections - 35 USC § 102

2 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-8, 10-11, 22-26, 48-53 and 55-61 are rejected under 35 U.S.C. 102(b) as being anticipated by Lim et al. (US 6,461,391 B1).

Lim et al. (US' 391 B1) teaches a hair dyeing composition comprising cationic direct dyes as claimed in claim 1 and 58 (see col. 7, lines 18-54) and an oxidation base of cationic tertiary para-phenylenediamine having a formula (1), which is identical to the claimed formula (I), when in the reference formula (1), R, R1 and R2 are alkyl radicals, R4 is hydrogen atom or an alkyl radical and R5 is a hydrogen atom as claimed in claims 1-8 and 10-

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11 (see col. 2, formula (1) and lines 44-50) and when in the claimed formula (I), R2 represents the onion radical Z of the claimed formula (II), R3 is a hydrogen atom, n is 1 or 0 and R1 is an alkyl radical. Lim et al. also, teaches the compounds 1-(4-aminophenyl)-N,N-dimethyl-N-pentylpyrrolidin-3-ammonium iodide and 1-(4-aminophenyl)-N-(2-hydroxyethyl)-N,N-dimethylpyrrolidin-3-ammonium iodide which are identical to the claimed compounds as claimed in claims 22-26 (see col. 19, Example 22 (compound 7) and col. 26, Example 29 (compound 14)). The cationic tertiary para-phenylenediamine is represented in the amount of 0.01 to about 5.0%, which is within the claimed range as claimed in claims 48-49 (see col. 3, lines 43-46), wherein the composition also comprises cationic polymers as claimed in claim 50 (see col. 9, line 19), thickening polymers as claimed in claim 51 (see col. 8, lines 39-55), surfactants as claimed in claim 52 (see col. 8, lines 23-25), additional primary intermediate (oxidation bases) of benzene-1,4-diamine (para-phenylenediamine) as claimed in claim 53 (see col. 3, line 57), coupler of resorcinol (1,3-dihydroxybenzene) as claimed in claims 55-56 (see col. 4, lines 56-57), wherein the couplers are presented in the amount of 0.005 to 20% which is within the claimed range as claimed in claim 57 (see col. 4, lines 50-52), wherein the composition further comprises hydroxylated solvent ethanol as claimed in claim 59 (see col. 8, line 15) and oxidizing agent of hydrogen peroxide as claimed in claim 60 (see 9, line 66). Lim et al. (US' 391 B1) also teaches a method for dyeing hair as claimed in claim 61 (see col. 9, lines 60-64). Lim et al. teaches all the limitations of the instant claims. Hence, Lim et al. anticipates the claims.

Claim Rejections - 35 USC § 103

3 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4 Claims 54 and 62-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1).

Lim et al. (US' 391 B1) teaches a hair dyeing composition comprising cationic direct dyes (see col. 7, lines 18-54) and an oxidation base of cationic tertiary para-phenylenediamine having a formula (1) (see col. 2, formula (1) and lines 44-50). Lim also teaches other primary intermediates (oxidation bases) such as para-phenylenediamines and couplers wherein the combination of primary intermediate and coupler compounds are presented in the composition in the amount of 0.001 to 10% (see col. 7, lines 8-11). Lim also teaches that the oxidation dyeing composition is mixed with an oxidizing agent immediately prior to application to the hair (see col. 9, lines 60-63).

The reference is silent about teaching the percentage amounts of the additional oxidation bases used in the composition. Further the reference does not teach a multi-compartment device as claimed.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to formulate such a composition by optimizing the amounts of the oxidation bases in the dyeing composition with the reasonable expectation of success because the reference clearly teaches that the amounts of the oxidation bases are equal to the amounts of the couplers that used in the dyeing composition as described above and, thus, a person of the ordinary skill would be motivated to optimize the amounts of the oxidation bases in the dyeing

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composition in order to get the maximum effective amounts of these ingredients in the composition, absent unexpected results.

With respect to claims 62-63, it would have been obvious to one having ordinary skill in the art at the time the invention was made to formulate such a composition by using a multi compartment device for holding and maintaining the composition because the reference clearly teaches that the oxidation composition is mixed with the oxidizing agent at the time of use, which implies that both the oxidation composition and the oxidizing agent are provided in separate containers, and, thus, a person of the ordinary skill in the art would be motivated to use a multi-compartment devices for holding the dyeing composition, absent unexpected results.

5 Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1) in view of Vidal et al. (FR. 2 822 696). The US. Patent Application Publication No. 2004/0187225 A1 is used in this rejection as an English translation of the (FR. 2 822 696).

Lim et al. (US' 391 B1) teaches a hair dyeing composition comprising cationic direct dyes (see col. 7, lines 18-54) and an oxidation base of cationic tertiary para-phenylenediamine having a formula (1) (see col. 2, formula (1) and lines 44-50).

The instant claims differ from the reference by reciting specific cationic direct dyes.

Vidal et al. (US' 225 A1) in analogous art of hair dyeing formulation, teaches a composition comprising heterocyclic dicationic diazo dye of a formula (I), which is similar to the claimed formula (Va) and having all the limitations of the claimed formula (Va) as claimed in claims 27- 29 (see page 2, paragraphs, 0015-0030).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the dyeing composition of Lim et al. by incorporating the cationic direct dyes as taught by Vidal et al. with a reasonable expectation of success because the primary reference of Lim et al. suggests the use of the direct dyes in the dyeing composition. Vidal et al. as a secondary reference clearly teaches that the use of cationic diazo dyes in the dyeing composition would provided a very broad range of colors, in particular highly chromatic colors, without forgetting the basic shades such as the blacks and the browns (see page 1, paragraph, 0013), and, thus, the person of the ordinary skill in the art would be motivated to incorporate the cationic diazo dyes of Vidal et al. in the dyeing composition of Lim et a. with a reasonable expectation of success for improving the performance of the dyeing composition and would expect such a composition to have similar properties to those claimed, absent unexpected results.

6 Claims 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1) in view of Vidal et al. (FR. 2 822 696) and further in view of Mockli (US 5,708,151). The US. Patent Application Puplication No. 2004/0187225 A1 is used in this rejection as an English translation of the (FR. 2 822 696).

The disclosures of Lim et al. (US'391 B1) and Vidal et al. (FR' 696) as described above do not teach or disclose a dyeing compositions comprising the dicationic dye of the formula (Vc) or (Vd) as claimed.

Mockli (US' 151) in other analogous art of hair dyeing formulation, teaches a composition comprising cationic imidazole azo dyes of a formulae (1) and (3) which are similar to the claimed formulae (Vc) and (Vd) as claimed in claim 32 (see col. 1, lines 10-45), wherein

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the cationic dye of the formula (1), is further represented by the formula similar to the formula as claimed in claim 33 (see cols, 13 and 14, the upper formula).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the dyeing composition of Lim et al. by incorporating the cationic direct dyes as taught by Mockli with a reasonable expectation of success because the primary reference of Lim et al. suggests the use of the direct dyes in the dyeing composition. Mockli as a secondary reference clearly teaches that the use of cationic diazo dyes in the dyeing composition provide human hair with shades having good fastness properties (see col. 6, lines 47-48), and, thus, the person of the ordinary skill in the art would be motivated to incorporate the cationic diazo dyes of Mockli in the dyeing composition of Lim et al. with a reasonable expectation of success for providing a hair with a shades having good fastness properties and would expect such a composition to have similar properties to those claimed, absent unexpected results.

7 Claims 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1) in view of Vidal et al. (FR. 2 822 696) and further in view of Kaser (US 5,674,299). The US. Patent Application Publication No. 2004/0187225 A1 is used in this rejection as an English translation of the (FR. 2 822 696).

The disclosures of Lim et al. (US'391 B1) and Vidal et al. (FR' 696) as described above do not teach or disclose a dyeing compositions comprising the dicationic dye of the formula (Ve) as claimed.

Kaser (US' 299) in other analogous art of dyeing formulation, teaches a composition comprising dicationic azo dyes of a formula (1), which is similar to the claimed formula (Ve) as

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claimed in claim 34 (see col. 1, formula 1), wherein the cationic dye of the formula (1), is further represented by the formula in which R1 is a propyl radical (C₃H₇) higher homolog and R2 is a benzyl radical as claimed in claim 35 (see col. 17 and 18 Example 62).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the dyeing composition of Lim et al. by incorporating the cationic direct dyes as taught by Kaser with a reasonable expectation of success because the primary reference of Lim et al. suggests the use of the direct dyes in the dyeing composition. Kaser as a secondary reference clearly teaches the use of cationic diazo dyes in the dyeing composition, and, thus, the person of the ordinary skill in the art would be motivated to incorporate the cationic diazo dyes of Kaser. in the dyeing composition of Lim et al. with a reasonable expectation of success and would expect such a composition to have similar properties to those claimed, absent unexpected results.

8 Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1) in view of Vidal et al. (FR. 2 822 696) and further in view of Vidal et al. (FR 2822698). The US. Patent Application Publications No. 2004/0187225 A1 and 2004/0093676 A1 are used in this rejection as the English translation of the (FR. 2 822 696) and (FR 2822698).

The disclosures of Lim et al. (US'391 B1) and Vidal et al. (FR' 696) as described above do not teach or disclose a dyeing compositions comprising the dicationic dye of the formula (Vf) or (Vg) as claimed.

Vidal et al. (US' 676 A1) in other analogous art of hair dyeing formulation, teaches a composition comprising dicationic monoazo dyes of a formulae (1), which is similar to the

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claimed formulae (Vf) as claimed in claim 36 (see page. 1, formula 1), wherein the cationic dye of the formula (1), have all the limitations as claimed in claim 36 (see pages 2, 3, and 4)

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the dyeing composition of Lim et al. by incorporating the cationic direct dyes as taught by Vidal et al. with a reasonable expectation of success because the primary reference of Lim et al. suggests the use of the direct dyes in the dyeing composition. Vidal et al. as a secondary reference clearly teaches the use of cationic diazo dyes in the dyeing composition, and, thus, the person of the ordinary skill in the art would be motivated to incorporate the cationic diazo dyes of Vidal et al. (US' 676 A1) in the dyeing composition of Lim et al. with a reasonable expectation of success and would expect such a composition to have similar properties to those claimed, absent unexpected results.

9 Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1) in view of Vidal et al. (FR. 2 822 696) and further in view of Vidal et al. (WO 02/078659 A1). The US. Patent Application Publications No. 2004/0187225 A1 and 2004/0093675 A1 are used in this rejection as the English translation of the (FR. 2 822 696) and (WO 02/078659 A1).

The disclosures of Lim et al. (US'391 B1) and Vidal et al. (FR' 696) as described above do not teach or disclose a dyeing compositions comprising the dicationic dye of the formula (Vf) or (Vg) as claimed.

Vidal et al. (US' 675 A1) in other analogous art of hair dyeing formulation, teaches a composition comprising dicationic monoazo dyes of a formula (1), which is similar to the claimed formulae (Vh) as claimed in claim 37 (see page. 2, formula 1), wherein the cationic dye

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of the formula (1), have all the limitations as claimed in claim 37 (see pages 2, formulae IV and V)

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the dyeing composition of Lim et al. by incorporating the cationic direct dyes as taught by Vidal et al. (US' 675 A1) with a reasonable expectation of success because the primary reference of Lim et al. suggests the use of the direct dyes in the dyeing composition. Vidal et al. as a secondary reference clearly teaches the use of cationic diazo dyes in the hair dyeing composition, and, thus, the person of the ordinary skill in the art would be motivated to incorporate the cationic diazo dyes of Vidal et al. (US' 675 A1) in the dyeing composition of Lim et al. with a reasonable expectation of success for improving the dyeing properties of the composition and would expect such a composition to have similar properties to those claimed, absent unexpected results.

10 Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1) in view of Vidal et al. (FR. 2 822 696) and further in view of Vidal et al. (WO 02/078658 A1). The US. Patent Application Publications No. 2004/0187225 A1 and 2004/0168263 A1 are used in this rejection as the English translation of the (FR. 2 822 696) and (WO 02/078658 A1).

The disclosures of Lim et al. (US'391 B1) and Vidal et al. (FR' 696) as described above do not teach or disclose a dyeing compositions comprising the dicationic dye of the formula (Vf) or (Vg) as claimed.

Vidal et al. (US' 263 A1) in other analogous art of hair dyeing formulation, teaches a composition comprising dicationic monoazo dyes of a formula (1), which is similar to the

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claimed formulae (Vi) as claimed in claim 38 (see page. 2, formula 1), wherein the cationic dye of the formula (1), have all the limitations as claimed in claim 38 (see pages 2, formulae II, III, IV and V).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the dyeing composition of Lim et al. by incorporating the cationic direct dyes as taught by Vidal et al. (US' 263 A1) with a reasonable expectation of success because the primary reference of Lim et al. suggests the use of the direct dyes in the dyeing composition. Vidal et al. as a secondary reference clearly teaches the use of cationic diazo dyes in the hair dyeing composition, and, thus, the person of the ordinary skill in the art would be motivated to incorporate the cationic diazo dyes of Vidal et al. (US' 263 A1) in the dyeing composition of Lim et al. with a reasonable expectation of success for improving the dyeing properties of the composition and would expect such a composition to have similar properties to those claimed, absent unexpected results.

11 Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1) in view of Vidal et al. (FR. 2 822 696) and further in view of Vidal et al. (WO 02/078657 A1). The US. Patent Application Publications No. 2004/0187225 A1 and 2004/0123400 A1 are used in this rejection as the English translation of the (FR. 2 822 696) and (WO 02/078657 A1).

The disclosures of Lim et al. (US'391 B1) and Vidal et al. (FR' 696) as described above do not teach or disclose a dyeing compositions comprising the dicationic dye of the formula (Vf) or (Vg) as claimed.

Vidal et al. (US' 400 A1) in other analogous art of hair dyeing formulation, teaches a composition comprising dicationic monoazo dyes of a formula (1), which is similar to the claimed formulae (Vj) as claimed in claim 39 (see page. 2, formula 1), wherein the cationic dye of the formula (1), have all the limitations as claimed in claim 39 (see pages 2, formulae II, III and IV).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the dyeing composition of Lim et al. by incorporating the cationic direct dyes as taught by Vidal et al. (US' 400 A1) with a reasonable expectation of success because the primary reference of Lim et al. suggests the use of the direct dyes in the dyeing composition. Vidal et al. as a secondary reference clearly teaches the use of cationic diazo dyes in the hair dyeing composition, and, thus, the person of the ordinary skill in the art would be motivated to incorporate the cationic diazo dyes of Vidal et al. (US' 400 A1) in the dyeing composition of Lim et a. with a reasonable expectation of success for improving the dyeing properties of the composition and would expect such a composition to have similar properties to those claimed, absent unexpected results.

12 Claims 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1) in view of Vidal et al. (FR. 2 822 696) and further in view of Vidal et al. (US 2003/0106169). The US. Patent Application Publication No. 2004/0187225 A1 is used in this rejection as the English translation of the (FR. 2 822 696).

The disclosures of Lim et al. (US'391 B1) and Vidal et al. (FR' 696) as described above do not teach or disclose a dyeing compositions comprising the dicationic dye of the formula (Vk) as claimed.

Vidal et al. (US' 169 A1) in other analogous art of hair dyeing formulation, teaches a composition comprising monocationic monoazo dyes of a formula (1), which is similar to the claimed formulae (Vj) as claimed in claim 40 (see page. 2, formula 1), wherein the cationic dye of the formula (1), have all the limitations as claimed in claim 40 (see pages 2, formulae II, III and IV). Further, Vidal et al. (US' 169 A1) teaches a dye 1,3-dimethyl-2-[4-pyrrolidin-1-yl)phenylazo]benzimidazol-1-ium as claimed in claim 40 (see page 4, paragraph 0055).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the dyeing composition of Lim et al. by incorporating the monocationic dyes as taught by Vidal et al. (US' 169 A1) with a reasonable expectation of success because the primary reference of Lim et al. suggests the use of the direct dyes in the dyeing composition. Vidal et al. as a secondary reference clearly teaches the use of monocationic dyes in the hair dyeing composition, and, thus, the person of the ordinary skill in the art would be motivated to incorporate the monocationic dyes of Vidal et al. (US' 169 A1) in the dyeing composition of Lim et a. with a reasonable expectation of success for improving the dyeing properties of the composition and would expect such a composition to have similar properties to those claimed, absent unexpected results.

13 Claims 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1) in view of Vidal et al. (FR. 2 822 696) and further in view of Rondeau et al. (US 6,432,146 B1). The US. Patent Application Publication No. 2004/0187225 A1 is used in this rejection as the English translation of the (FR. 2 822 696).

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The disclosures of Lim et al. (US' 391 B1) and Vidal et al. (FR' 696) as described above do not teach or disclose a dyeing composition comprising the dicationic dye of the formula (Vk) as claimed.

Rondeau et al. (US' 146 B1) in other analogous art of hair dyeing formulation, teaches a composition comprising monocationic monoazo dyes of a formula (IV), which is similar to the claimed formulae (VI) as claimed in claim 42 (see col. 3, formula IV), wherein the cationic dye of the formula (IV), have all the limitations as claimed in claim 42 (see col. 4, formulae A2-A10). Further, Rondeau et al. (US' 146 B1) teaches a dye of a formula V which is similar to the claimed formula (Vm) (see col. 6, formula V) and also formulae VI and VI' as claimed in claim 44 (see col. 7, formulae VI and VI') and formula (VII) as claimed in claim 45 (see col. 8, formula VII) and wherein the heterocyclic group is imidazolium or pyridinium ring substituted with one or more alkyl groups as claimed in claim 46 (see col. 8, formula VII).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the dyeing composition of Lim et al. by incorporating the monocationic dyes as taught by Rondeau et al. (US' 146 B1) with a reasonable expectation of success because the primary reference of Lim et al. suggests the use of the direct dyes in the dyeing composition. Vidal et al. as a secondary reference clearly teaches the use of monocationic dyes in the hair dyeing composition, and, thus, the person of the ordinary skill in the art would be motivated to incorporate the monocationic dyes of Rondeau et al. (US' 146 B1) in the dyeing composition of Lim et al. with a reasonable expectation of success for improving the dyeing properties of the composition and would expect such a composition to have similar properties to those claimed, absent unexpected results.

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14 Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1) in view of Kawai et al. (US 2002/0144356 A1).

The disclosures of Lim et al. (US'391 B1) as described above does not teach or disclose a the specific species of the direct dyes as claimed.

However, Lim et al. (US' 391 B1) teaches a composition comprising a number of species of direct dyes (see col. 7, lines 18-55).

Kawai et al. (US' 356 A1) is analogous art of hair dyeing formulation, teaches a composition comprising direct dyes of basic red 22 and basic yellow 87 as claimed in claim 47 (see page 1, paragraph 0018).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the composition of Lim et al. by incorporating the direct dyes of basic red 22 and basic yellow 87 as taught by Kawai et al. to make such a composition because Lim et al. as a primary reference suggests the use of direct dyes in the composition. Kawai et al as a secondary reference teaches clearly the claimed species of direct dyeing in the composition, and, thus, a person of the ordinary skill in the art would be motivated to incorporate the direct dyes of Kawai et al in the composition of Lim et al and would expect such a composition to have similar properties to those claimed, absent unexpected results.

Allowable Subject Matter

Claims 9,12-21, 30 and 31 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record do not teach or disclose cationic para-

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phenylenedimane compounds of the claimed formula (II), in which x is equal 1. The prior art of record also do not teach or disclose para-phenylenedimane compounds of the claimed formulae (III) and (IV). The prior art of record further do not teach or disclose the claimed formula (Vb) and the recited compounds as claimed in claim 31.

Conclusion

The remaining references listed on from 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eisa B Elhilo whose telephone number is (571) 272-1315. The examiner can normally be reached on M - F (8:00 -5:30) with alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eisa Elhilo

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